

Attorney's Docket No.: 09857-030001

AP/3628  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Peter Martyn et al.      Art Unit :      3628  
Serial No.: 09/404,518      Examiner :      Jeffrey C. Pwu  
Filed: September 23, 1999  
Title: MATCH-OFF OF ORDER FLOW IN ELECTRONIC MARKET SYSTEM

**Mail Stop Appeal Brief - Patents**

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BRIEF ON APPEAL (TWICE CORRECTED)

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### **Real Party In Interest**

The real party in interest in the above application is The Nasdaq Stock Market, Inc., a corporation existing by virtue of laws of the State of Delaware.

### **Related Appeals and Interferences**

The appellant is not aware of any appeals or interferences related to the above-identified patent application.

### **Status of Claims**

This is an appeal from the decision of the Primary Examiner in an office action dated July 3, 2003, finally rejecting claims 1, 3-14, 16-20, all of the claims in the above application.

Claims 1, 3-14, 16-20 were rejected under 35 U.S.C. §102(e), as anticipated by May U.S. Patent 6,421,653.

Claims 1, 3, 11 and 18 were rejected under 35 U.S.C. §112, second paragraph, for lack of antecedent basis.

### **Status of Amendments**

Appellant filed a Reply pursuant to 37 C.F.R. 1.116(a) on September 16, 2003. Appellant also filed a Notice of Appeal on January 5, 2004. Appellant received an Advisory Action dated October 14, 2003, in which the Examiner indicated that the proposed amendments did not overcome the prior art rejection. The examiner did not indicate if the proposed amendments overcame the rejection under 112, second paragraph. The examiner did not indicate whether or not the Reply would be entered.

In a telephone interview with the examiner conducted on April 9, 2004, the examiner indicated entry of the amendment and that the amendment overcame the rejections under 35 U.S.C. 112, second paragraph.

The copy of the claims attached to this brief therefore reflects entry of the September 16, 2003 Reply.

An amendment pursuant to 37 C.F.R. 1.116 (b) was previously filed to amend claims 16 and 17. The attached claim set reflects entry of that amendment.

## **Summary of the Invention**

### Background

This invention relates to electronic trading systems particularly financial trading systems used in equity markets. Equity markets collect, aggregate and display pre-trade information to market participants. In the Nasdaq Stock Market, for example, pre-trade information takes the form of a quote that represents a single (or an aggregate of same-priced) principal or agency orders. A market such as the Nasdaq Stock Market provides trading platforms through which market participants may access liquidity indicated in the marketplace. (*Appellant's specification page 1, lines 3-10*).

### Claim 1

Claim 1 is directed to a method of executing an order in a market system. "Referring to FIG. 1, an electronic market 10 is shown. The electronic market 10 includes client systems 12 that access a central quote/order collector facility 20. The client systems 12 can be broker/dealer systems 12a, electronic communication networks (ECN's) 12b, market-maker systems 12c, and other exchanges 12d." [Page 3, lines 2-7]

Inventive features of claim 1 include receiving an order from a customer of a market participant. "For any given stock, a registered market maker or ECN may directly enter a non-marketable order i.e., quote into the system 20 on behalf of its customer account, or it may sponsor the direct entry of an order by its customer." [Page 4, lines 6-9]

Inventive features of claim 1 also include checking if a market participant identification associated with the order from the customer matches a market participant identification representing a quote in the system which is at a best bid or best offer price in the system; and if the market participant identification matches the market participant identification representing a best bid or offer quote in the system.

"Referring now to FIG. 4, the internalize execution manager 26c is shown." [Page 10, lines 4-10]. "For example, if MMA sends system 20 all of its quotes/orders and is at the best bid of \$20 showing 4,000 shares (attributable and non-attributable), and the MMA sends OCF 25 a 1,000 share market sell order from one of its customers, OCR 25 will examine 67a the identification of the order and if it matches the identification of the market participant who is at the best bid or offer for that security, the OCP 25 will execute 67b the order against the participant's own quote, thus matching off the order on behalf of the participant." [Page 10, lines 15-22].

Inventive features of claim 1 also include matching off the customer order against the one of the best bid or best offer quote of the matching market participant identification that is at an opposite side of a market irrespective of any other priority established for matching orders in the system.

"internalize execution manager 26c matches-off a participant's

agency or proprietary orders against that participant's quotes/order before the order is sent for time/price priority execution in the quote/order collector facility 20." [Page 10, lines 4-10].

#### Claim 11

Claim 11 is directed to a market system. This is generally supported by Fig. 1 and the corresponding support as the analogous feature of claim 1.

Inventive features of claim 11 include an order execution process that receives orders and matches orders against quotes posted in the system on a time priority basis. "Referring to FIG. 3A, the order collector process 25 receives orders/quotes and time stamps 42 each order/quote upon receipt. This time stamp determines the order's/quote's ranking for automated execution." [Page 7, lines 6-9].

Inventive features of claim 11 also include an order match-off process that checks if a market participant identification associated with a received customer order matches a market participant identification representing a quote in the system that is at a best bid or best offer price in the system and if the market participant identification matches the market participant identification representing a best bid or offer quote in the system, matches off the customer order against the one of the best bid or best offer quote of the matching market participant identification that is at an opposite side of the market irrespective of any other priority established for matching orders in the system. "Referring now to FIG. 4, the internalize execution manager 26c is shown. Another benefit of the system 20 is that when Quoting Market Participant is at the

best bid/best offer, internalize execution manager 26c matches-off a participant's agency or proprietary orders against that participant's quotes/order before the order is sent for time/price priority execution in the quote/order collector facility 20. Quoting Market Participants encounter difficulties in managing their book because Quoting Market Participants may transmit only a single quote (which may represent a single order or an aggregate of proprietary/agency interest at a single price).

For example, if MMA sends system 20 all of its quotes/orders and is at the best bid of \$20 showing 4,000 shares (attributable and non-attributable), and the MMA sends OCF 25 a 1,000 share market sell order from one its customers, OCR 25 will examine 67a the identification of the order and if it matches the identification of the market participant who is at the best bid or offer for that security, the OCP 25 will execute 67b the order against the participant's own quote, thus matching off the order on behalf of the participant. [Page 10, lines 4-23].

#### Claim 18

Claim 18 is directed to a computer program product for operating a market system comprises instructions. [Original claim 18] "The quote/order collector facility 20 is comprised of one or preferably a plurality of server computers generally denoted as 22 including a processor 22a, main memory 22b and storage 22c. The storage system 22c includes quote/order collector process 25 that is executed in memory 22b. In general, server 22 is a complex computer server, the details of

which are not important to an understanding of the present invention." [Page 3, lines 19-25].

Inventive features of claim 18 include instructions to receive orders and match orders against quotes posted in the system on a time priority basis. This feature is supported generally as is the analogous feature of claim 1.

Inventive features of claim 18 include instructions to check if a market participant identification associated with a received customer order matches a market participant identification representing a quote in the system that is at a best bid or best offer price in the system. This feature is supported generally as is the analogous feature of claim 1.

Inventive features of claim 18 include instructions to match off the received customer order against the quote of the matching market participant identification at an opposite side of the market irrespective of a different priority established for matching orders in the system. This feature is supported generally as is the analogous feature of claim 1.

#### **Grounds of Rejection to be Reviewed on Appeal**

(1) Claims 1, 11 and 18 stand rejected under 35 U.S.C. 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(2) Claims 1, 3-14, 16-20 stand rejected under 35 U.S.C. 102(e) as being anticipated by May U.S. Patent 6,421,653.

## **Argument**

### Indefiniteness

It is not necessary for the claims to recite every element needed for practical utilization of the claimed subject matter in order for a claim to be proper under 35 U.S.C. §112, second paragraph, *Bendix Corp. v. United States*, 600 F.2d 1364, 1369, 204 U.S.P.Q. 617, 621 (Court of Claims, 1979). It is not the role of the claims to enable one skilled in the art to reproduce the invention, but rather to define the legal metes and bounds of the invention. *In re Geoffe*, 526 F.2d 1393, 1397, 188 U.S.P.Q. 131, (CCPA, 1975). The claims need not provide all operating details but a method claim should recite a positive step. *In re Erlich*, 3 U.S.P.Q. 2d 1011 (Bd. Pat. App. & Int., 1986).

### Anticipation

"It is well settled that anticipation under 35 U.S.C. §102 requires the presence in a single reference of all of the elements of a claimed invention." *Ex parte Chopra*, 229 U.S.P.Q. 230, 231 (BPA&I 1985) and cases cited.

"Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim." *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983).

"This court has repeatedly stated that the defense of lack of novelty (i.e., 'anticipation') can only be established by a single prior art reference which discloses each and every element of the claimed invention." *Structural Rubber Prod. Co. v. Park Rubber Co.*, 223 U.S.P.Q. 1264, 1270 (Fed. Cir. 1984),



citing five prior Federal Circuit decisions since 1983 including *Connell*.

In a later analogous case the Court of Appeals for the Federal Circuit again applied this rule in reversing a denial of a motion for judgment n.o.v. after a jury finding that claims were anticipated. *Jamesbury Corp. v. Litton Industrial Prod., Inc.*, 225 U.S.P.Q. 253 (Fed. Cir. 1985).

After quoting from *Connell*, "Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim," 225 U.S.P.Q. at 256, the court observed that the patentee accomplished a constant tight contact in a ball valve by a lip on the seal or ring which interferes with the placement of the ball. The lip protruded into the area where the ball will be placed and was thus deflected after the ball was assembled into the valve. Because of this constant pressure, the patented valve was described as providing a particularly good seal when regulating a low pressure stream. The court quoted with approval from a 1967 Court of Claims decision adopting the opinion of then Commissioner and later Judge Donald E. Lane:

[T]he term "engaging the ball" recited in claims 7 and 8 means that the lip contacts the ball with sufficient force to provide a fluid tight seal \*\*\*\* The Saunders flange or lip only sealingly engages the ball 1 on the upstream side when the fluid pressure forces the lip against the ball and never sealingly engages the ball on the downstream side because there is no fluid pressure there to force the lip against the ball. The Saunders sealing ring provides a compression type of seal which depends upon the ball pressing into the

material of the ring. \*\*\* The seal of Saunders depends primarily on the contact between the ball and the body of the sealing ring, and the flange or lip sealingly contacts the ball on the upstream side when the fluid pressure increases. 225 U.S.P.Q. at 258.

Relying on *Jamesbury*, the ITC said, "Anticipation requires looking at a reference, and comparing the disclosure of the reference with the claims of the patent in suit. A claimed device is anticipated if a single prior art reference discloses all the elements of the claimed invention as arranged in the claim." *In re Certain Floppy Disk Drives and Components Thereof*, 227 U.S.P.Q. 982, 985 (U.S. ITC 1985).

#### **Discussion**

(1) Claims 1, 11 and 18 particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Appellant had amended the claims to provide antecedent basis for the terms found missing such basis by the examiner. The examiner rejected these claims in particular because the examiner appeared unable to ascertain what was meant by the "best bid or offer."

The examiner had indicated in the telephone interview that the amendments overcame this rejection.

Claim 1 for example introduces the term using the indefinite article "a." Accordingly antecedent basis is found for the phrase. Appellant contends that one of ordinary skill

in this art would have no difficulty in ascertaining the meaning of "best bid or offer" in the context of the market system disclosed by Appellant. It is not the role of the claims to enable one skilled in the art to reproduce the invention, but rather to define the legal metes and bounds of the invention. *In re Geoffe*, 526 F.2d 1393, 1397, 188 U.S.P.Q. 131, (CCPA, 1975).

(2) Claims 1, 3-14, 16-20 are  
allowable over May '653

This rejection is improper because the examiner has not made a prima facie case for anticipation. See *Connell v. Sears, Roebuck & Co.*, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983).

"Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.") Appellant provides a trading process where matching can occur between a customer order and a quoting market participant, irrespective of a priority established for the quoting market participant.

Group I (claims 1, 6, 9 and 10)

Appellant's claim 1 is representative of this group of claims. Claim 1 is directed to a method of executing an order in a market system. Specifically, the method pertains to handling orders that are received from a customer of a market participant, who has a quote in the system, which is at a best bid or best offer price in the system, but may not be at a priority level to have the market participant's quote be match to the customer order.

Claim 1 recites checking if a market participant identification associated with the order matches a market

participant identification representing a quote in the system and if the market participant identification matches the market participant identification. This feature is not described by the teachings of May where a trader can identify bids and offers that they are eligible to trade on. May merely uses this credit checking feature to display all prices in the system in which a user can trade. This credit checking feature of May does not anticipate the feature of determining if an incoming order has a market participant identification that matches a market participant identification representing a quote in the system. Claim 1 specifically requires checking if match exists between two market marker identifications. May does not teach this but rather teaches to identify bids and offers that traders are eligible to trade against based on credit information not market marker identifications.

May also does not describe matching the customer order against the matching market participant identification that is at an opposite side of a market irrespective of any other priority established for matching orders in the system. May is not directed to a market system in which there are market participants that maintain quotes, nor is May directed to a system in which customers of market participants trade against the quotes.

The examiner contends that May teaches checking at Col. 9 lines 31-53. Rather, May is directed to an anonymous trading system which enables traders to identify bids and offers which they are eligible to trade in based on credit preference information provided before initiating a trade (Col. 9, lines 34-36). Thus, May teaches to mark bids and offers with credit information by applying an indicia to the bids and offers (color

coding see Col. 30 line 10-15). May allows a user to set preferences and enter (or not enter) a transaction with another user based on the other user's credit (see Col. 9, lines 44-54).

However, May also teaches an anonymous trading system. Therefore, May inherently does not teach to check market participant identifications, for the purpose of providing matches of quotes to orders, irrespective of a priority established in the system.

Accordingly, the examiner has not shown that May anticipates claim 1, because May does not describe at least "checking if a market participant identification associated with the order from the customer matches a market participant identification representing a quote in the system and matching off the customer order of the matching market participant identification that is at an opposite side of a market ... irrespective of any other priority established for matching orders ..."

Group II (claims 4 and 5)

Appellant's claim 4 is representative of this group of claims. Claim 4 includes calling a cancel request to cancel a quote at the side of the market in which a matched off order will be executed. While May teaches canceling orders, May does not teach to cancel quotes and in particular May does not teach to incorporate calling a cancel request to cancel a quote at the side of the market in which a matched off order will be executed. This avoids a potential dual liability problem for a market participant that is simply not recognized by May.

Claim 5 further distinguishes by limiting the calling a cancel request to occur prior to matching off of the order.

Group III (claim 7)

Appellant's claim 7 is representative of this group of claims. Claim 7 further limits claim 1 to checking the customer order against proprietary quotes and agency quotes of a market participant identification representing a quote in the system, which is at the best bid or best offer. May does not deal with quotes and in particular proprietary quotes and agency quotes of a market participant. May states at Col. 10, lines 13-16, that: "links to external applications such as MarketSheet<sup>TM</sup> (a trademark of TIBCO, Inc.) (referred to herein as the quote screen and graph screen for illustrative purposes), ..." May apparently does not describe and does not suggest agency and principal quotes.

Group IV (claim 8)

Appellant's claim 8 is representative of this group of claims. Claim 8 depends from claim 1 and adds the feature of receiving an internal book of the market participant to match-off against the market participant's posted agency or proprietary quotes. May simply does not receive other entities' order books.

Group V (claims 3, 11, 12, 14, 17, 18 and 20)

Appellant's claim 11 is representative of this group of claims. Claim 11 is an independent claim that shares common features with claim 1. Claim 11 further limits this aspect of the invention over claim 1 by also reciting that quotes are posted according to a time priority.

Appellant's claim 11 is not taught by May. May includes discussion in the auction system of listing orders in a price-

time priority, but does not teach use of quotes or quotes in a time priority. At Col. Line May discloses:

The market detail interface 302 enables a trader to view essentially all the orders in the market for a particular instrument, both bids and offers. The bid orders are listed in a bid window 304 where the credit levels (e.g., A, B or C), bid quantities and bid prices are provided. The offer orders (i.e., ask orders) are listed in ask window 306 where the ask prices, ask quantities and credit levels are provided. As with the market entry interface 250, the orders are color-coded with the appropriate credit preferences. This is a significant departure from many prior art systems which only show the best dealable price or blended prices.

In the market detail interface 302, orders are individually listed in the bid window 304 or the ask window 306 in order of price, and then according to the time the orders were entered into the market. The user has the ability to select any order on the screen and hit or lift the order, assuming of course that the respective credit preferences will permit a trade. The user is provided with a function bar 308, which is substantially the same as function bar 290. Particularly, the buttons of the function bar 308 are substantially identically to those on the function bar 290 except that they only apply to a particular instrument while the buttons of the function bar 290 apply against multiple instruments. Further, a fair price indicator, spot/setting indicator (i.e., the LIBOR for that day), and last traded price indicator are provided along the bottom of the bid window 304 and ask window 306. The last trade pricing may be replaced by volume, duration, RQ, last close price, etc.

An advantage of the market detail interface 302 is that the user is not restricted to trading only the best price or first order. At no point in the process will any orders be automatically matched against each other by the system 10. The user is in complete control of the order flow process.

Therefore, May apparently does not match in time priority. Rather, May apparently teaches away from any automatic match deferring instead to a user to be in complete control of the order flow process.

Appellant's claim 3 further limits claim 1. Claim 3 recites that the priority established in the system is: "a time priority of a plurality of quotes in the system, at the opposite side of the market to the customer order." Appellant's claim 3 is likewise not taught by May for the reasons discussed above.

Group VI (claims 13, 16 and 19)

Appellant's claim 13 is representative of this group of claims. Claim 13 includes calling a cancel request to cancel a quote at the side of the market in which an internalized order will be executed. While May teaches canceling orders, May does not teach to cancel quotes and in particular May does not teach to incorporate calling a cancel request to cancel a quote at the side of the market in which an internalized order will be executed. This avoids a potential dual liability problem for a market participant that is simply not present in an Auction system as May where the user enters orders.

**Conclusion**

Appellant submits that claims 1, 3-14, 16-20 are allowable over May. Therefore, the Examiner erred in rejecting Appellant's claims and should be reversed.

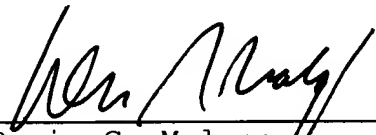


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Respectfully submitted,

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### Appendix of Claims

1. A method of executing an order in a market system comprises:

receiving an order from a customer of a market participant;  
for the order, checking if a market participant identification associated with the order from the customer matches a market participant identification representing a quote in the system which is at a best bid or best offer price in the system; and if the market participant identification matches the market participant identification representing a best bid or offer quote in the system,

matching off the customer order against the one of the best bid or best offer quote of the matching market participant identification that is at an opposite side of a market irrespective of any other priority established for matching orders in the system.

2. (canceled)

3. The method of claim 1 wherein matching off the order without regard to any priority is with respect to a time priority of a plurality of quotes in the system, at the opposite side of the market to the customer order.

4. The method of claim 1 further comprising:  
calling a cancel request to cancel a quote at the side of the market in which a matched off order will be executed.

5. The method of claim 1 further comprising:

calling a cancel request prior to matching off the order to cancel a quote at the side of the market at which an matched off order will be executed.

6. The method of claim 1 further comprises routing the order to a market participant corresponding to said market participant that has the one of the best bid or best offer that is at the opposite side of the market.

7. The method of claim 1 wherein the customer order is checked against proprietary quotes and agency quotes of a market participant identification representing a quote in the system which is at the best bid or best offer.

8. The method of claim 1 further comprising:  
receiving an internal book of the market participant to match-off against the market participant's posted agency or proprietary quotes.

9. The method of claim 1 wherein receiving a customer order further comprises:  
receiving the order via an order execution system.

10. The method of claim 1 wherein receiving a customer order further comprises:  
receiving the order via a negotiation order entry system.

11. A market system comprises:

an order execution process that receives orders and matches orders against quotes posted in the system on a time priority basis;

an order match-off process that checks if a market participant identification associated with a received customer order matches a market participant identification representing a quote in the system that is at a best bid or best offer price in the system and if the market participant identification matches the market participant identification representing a best bid or offer quote in the system, matches off the customer order against the one of the best bid or best offer quote of the matching market participant identification that is at an opposite side of the market irrespective of any other priority established for matching orders in the system.

12. The system of claim 11 wherein the order match-off process further comprises:

a process to execute the order against the one of the best bid or best offer that is at the opposite side of the market.

13. The system of claim 11 further comprising:

a process to request a cancellation of a quote at a side of the market in which an internalized order will be executed.

14. The system of claim 11 further comprising:

a routing process to route an order to a market participant corresponding to the participant that has the one of the best bid or best offer that is at the opposite side of the market.

15. (Canceled)

16. The system of claim 12 further comprising:  
a process to request a cancellation of a quote at a side of the market in which an internalized order will be executed.

17. The system of claim 12 further comprising:  
a routing process to route an order to a market participant corresponding to the participant that has the one of the best bid or best offer that is at the opposite side of the market.

18. A computer program product for operating a market system comprises instructions for causing a computer to:  
receive orders and match orders against quotes posted in the system on a time priority basis;  
check if a market participant identification associated with a received customer order matches a market participant identification representing a quote in the system that is at a best bid or best offer price in the system; and  
match off the received customer order against the quote of the matching market participant identification at an opposite side of the market irrespective of a different priority established for matching orders in the system.

19. The computer program product of claim 18 further comprising instructions to:  
request a cancellation of a quote at a side of the market in which an internalized order will be executed.

20. The computer program product of claim 18 further comprising instructions to:

route the order to a market participant corresponding to the participant that has the one of the best bid or best offer that is at the opposite side of the market.

**Evidence Appendix**

**None**

**Related Proceedings Appendix**

**None**